

IN THE CLAIMS

Please amend the claims as follows:

Claim 1 (Currently Amended): A microreactor for producing hydrogen by reforming a feed material, comprising:

a joined body including a first substrate and a second substrate that are joined together;

a flow path formed by a microchannel portion formed on a joining surface of at least one of said first or second substrates; and

a catalyst carrying member disposed in said flow path and including a catalyst, said catalyst is supported independent of wall surfaces of said microchannel portion that define said flow path,

wherein the catalyst carrying member is wire shaped, and

wherein said wall surfaces of said microchannel portion that define said flow path are free of any film.

Claim 2 (Previously Presented): A microreactor according to claim 1, wherein said catalyst carrying member comprises a metal base body, a metal oxide film covering said metal base body, and said catalyst supported on said metal oxide film.

Claim 3 (Original): A microreactor according to claim 2, wherein said metal oxide film is formed by anodic oxidation of said metal base body.

Claim 4 (Original): A microreactor according to claim 2, wherein said metal oxide film is formed by a boehmite treatment.

Claim 5 (Currently Amended): A microreactor according to claim 1, wherein at least one of said first or second substrates of said joined body is provided with a heater ~~at at least one of said first or second substrates~~.

Claim 6 (Original): A microreactor according to claim 5, wherein said heater is provided on said substrate via an insulating layer.

Claim 7 (Original): A microreactor according to claim 1, wherein said catalyst carrying member comprises an electric heater, a metal oxide film covering said electric heater, and a catalyst supported on said metal oxide film.

Claim 8 (Original): A microreactor according to claim 7, wherein said metal oxide film is formed by a boehmite treatment.

Claim 9 (Previously Presented): A microreactor according to claim 1, wherein said catalyst carrying member comprises an electric heater, a metal film covering said electric heater, a metal oxide film covering said metal film, and said catalyst supported on said metal oxide film.

Claim 10 (Original): A microreactor according to claim 9, wherein said metal oxide film is formed by anodic oxidation of said metal film.

Claim 11 (Original): A microreactor according to claim 9, wherein said metal oxide film is formed by a boehmite treatment.

Claims 12-29 (Canceled).

Claim 30 (Previously Presented): A microreactor according to claim 2, wherein said metal base body is circular in section.

Claim 31 (Currently Amended): A microreactor for producing hydrogen by reforming a feed material, comprising:

a joined body including a first substrate and a second substrate that are joined together;

a flow path formed by a microchannel portion formed on a joining surface of at least one of said first or second substrates;

a catalyst carrying member disposed in said flow path and including a catalyst, said catalyst is supported independent of wall surfaces of said microchannel portion that define said flow path;

wherein said catalyst carrying member comprises a metal base body, a metal oxide film covering said metal base body, and said catalyst supported on said metal oxide film[[]; and]],

wherein said metal body includes a wavelike plate shape in section, and

wherein both end openings of said flow path are exposed at a first end surface of said joined body.